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### THREE

# **Troubled Geographies: A Historical GIS of Religion, Society, and Conflict in Ireland since the Great Famine**

NIALL CUNNINGHAM

THROUGHOUT THE DEVELOPMENT OF MODERN IRELAND RELIGION has played a central role in the persistence of complex communal identities.<sup>1</sup> Notwithstanding what has been considered to be the substantive resolution of “the Troubles” in Northern Ireland, religious identity has continued to significantly influence attitudes and behavior.<sup>2</sup> However, this is not to be reductive: the divisions between Catholics and Protestants have not been representative of substantive theological conflict; instead, they have reflected the political chasm between nationalists, the overwhelming majority of whom are Catholic, and Protestants, who have always made up the vast majority of the unionist political bloc that seeks to maintain the constitutional link with the rest of the United Kingdom. Many scholars have set out to appraise these complexities and their outcomes, but few have explored them through an overtly geographical framing to understand how the conflict that has so dogged Northern Ireland in contemporary decades relates to longer-term (re)configurations of identities right across the island. In that context, this chapter will provide some insights into “Troubled Geographies: Two Centuries of Religious Division in Ireland,” a major project funded by the UK’s Arts and Humanities Research Council (AHRC) that has gone some way in addressing this lacuna.

### BACKGROUND

For historical reasons, primarily the legacy of the partial and inconsistent nature of successive attempts to systematically colonize Ireland

during the sixteenth and seventeenth centuries, the island has been left with a religious landscape that has proved both highly distinctive and in certain regards remarkably persistent over time.<sup>3</sup> The close identification of Catholicism with nationalist aspirations and the emergence of a unionist ideology in response among the Protestant population in the late nineteenth century have meant that there still exists an extremely powerful coalescence between religious affiliation and political belief unparalleled in the Western world.<sup>4</sup> The corollary of this is that political disagreements surrounding identities, rights, and loyalties have usually reflected broader religious or ethnic antagonisms and that conflicts accruing from these have had distinctive spatial characteristics.<sup>5</sup> A desire to disentangle some of these interwoven strands and to provide a better understanding of change in Ireland's contested religious geographies since the mid-nineteenth century therefore provided a compelling basis for this work.

"Spatial analysis" encompasses a growing class of techniques for studying phenomena using their geographical characteristics and distributions. A major spatial analysis of change in Ireland's religious geographies was made possible in particular by the availability of census data at detailed territorial levels. Unlike Britain, religion has continuously formed part of the Irish census since the mid-nineteenth century. The availability of census data on the subject from 1861 onward is testament to the differing role of religion within the political cultures of Ireland and Britain historically, with Irish enthusiasm for enumerating Catholic and Protestant groups being based on a desire to establish the levels of support for the broader competing ideologies of nationalism and unionism.<sup>6</sup> The availability of detailed data from successive Irish censuses not only on religion but on a range of other demographic and social variables as well made it possible to propose a collaborative project between Lancaster University and Queen's University Belfast (QUB). A key objective of this collaboration was to integrate a Geographical Information System (GIS) with the preexisting Database of Irish Historical Statistics (DIHS) and to use the resultant data to analyze the relationships between religious identity, place, and other characteristics. A second objective, to extend the analysis of these relations to another database of Troubles-related fatalities, is described later in the chapter.

Starting with 1821 and running up to the last census in the predigital era in 1971, the Irish censuses, usually conducted on a decennial basis, form one of the principal elements in the DIHS. The DIHS program was initiated by the Department of Social and Economic History at QUB in 1990 to draw together the main sources of census and survey data in Irish history and provide a repository for a wide range of other related material, including annual emigration estimates and poverty assessments derived from Poor Law Union statistics.<sup>7</sup> Funded by the Economic and Social Research Council (ESRC) and by QUB itself, the initial phase of the DIHS project was focused on bringing together these data from the period up to 1911. Subsequent funding made possible the inclusion of additional data for the later period since the partition of Ireland in 1921 up to 1971.<sup>8</sup> In the earlier phase, manual inputting of statistics from the source papers was required, but thereafter the availability of high-quality Optical Character Recognition (OCR) considerably hastened the process of data capture.<sup>9</sup> Since 1971 decennial census data have been published in digital format by both the Northern Ireland Statistics and Research Agency (NISRA) and its counterpart in the Republic of Ireland, the Central Statistics Office (CSO). The inclusion of these data in the DIHS made it possible to construct a time series extending from the mid-nineteenth century up to the most recent censuses for both Northern Ireland and the Republic. Furthermore, after the “Troubled Geographies” project commenced, it was discovered that data coverage could be extended farther back in time by utilizing the survey on religious demography available from the 1834 First Report of Commissioners of Public Instruction, Ireland. The 1834 report differed from later censuses in that it was a poll of church service attendance on a given Sunday in that year, thus giving a measure of practice, rather than being a census of nominal religious affiliation, as would later become the norm.<sup>10</sup> However, the report has been judged to be a reliable indicator of the populations of the major denominations at that time. Use of these 1834 data in conjunction with data for later years facilitated an analysis of the impact of the Great Famine on the different religious groupings, although that is not the main focus here.<sup>11</sup>

The “Troubled Geographies” project can be viewed as contributing to a trend being established by some leading scholars toward using

geographically referenced statistics in the study of modern Ireland.<sup>12</sup> As elaborated below, the integration of GIS with the DIHS has facilitated analysis using the exploratory spatial statistical techniques that are increasingly included as standard in GIS software packages. To a degree these techniques can be used to explore temporal changes as well as geographic patterns and differences for the years for which data are available. However, the lack of boundary stability for the territorial divisions used in organizing and referencing data is a significant issue. Various boundary adjustments made at different dates make it challenging to distinguish between actual change, identifiable from data, and changes in the definition of spatial units.<sup>13</sup> These boundary changes include myriad alterations that were relatively minor but also wholesale changes, notably with the creation of entirely new jurisdictions after the partition of Ireland in 1921.

#### APPROACHES AND CHALLENGES IN THE CONSTRUCTION OF THE IRISH HISTORICAL GIS

The GIS development referred to above has been named the Irish Historical GIS (HGIS). An initial data-inventorying exercise confirmed the availability and compatibility of data on religious denomination across the time frame under study. This is not the case with all key social variables, with some, such as the categories used for recording occupation, having been much more changeable.

While “the Troubles” most commonly refers to the conflict emerging in the late 1960s, it is sometimes also used to refer to the trauma of the years 1918 to 1923 surrounding the partition of Ireland, which broke the continuum of decennial censuses established earlier. At that time both what was then the Irish Free State and Northern Ireland held censuses in the mid-1920s in order to gain perspective on the demographic and broader socioeconomic ramifications of partition. The Second World War caused a further hiatus in obtaining data, but after the war decadal census taking resumed. Census data that had already been digitized prior to the “Troubled Geographies” project are held on the Histpop website, which is hosted by the Online Historical Population Reports Project, a development of the Arts and Humanities Data

Service History operating within the UK Data Archive at the University of Essex.<sup>14</sup>

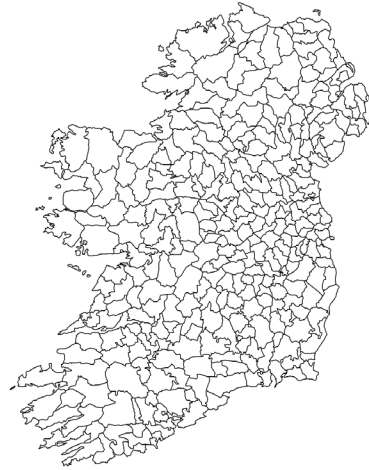
The approach taken with the GIS may be regarded as a repeated cross-sectional approach; that is, it is based on analyzing successive sets of data for different points in time and comparing the results. Support for more integrated space-time representation and analyses remains a research topic for HGIS and GIS more generally.<sup>15</sup> However, the aforementioned changes to territorial boundaries complicated even this cross-sectional approach. In most national contexts, boundary changes for statistical and administrative units are at some point inevitable if those units are to continue to reflect changes in population size and distribution. Ireland is of course no exception to those trends, but while it did see rapid population growth up until the 1840s, from that point onward its demographic experience differed markedly from every other developed nation, being the only one with a population to *decrease* compared to the level in the mid-nineteenth century.<sup>16</sup> This may mean that the boundary adjustments occurring over Ireland, although substantial in their own right, are, comparatively speaking, less in total than the corresponding level of changes experienced in other modern states. Nonetheless, these boundary alterations posed challenges in terms of the ability to determine key changes in the island's demography and religious geographies over time. The extreme version of this is when an entire set of administrative divisions becomes redundant and is replaced by another. Both of these scenarios have been recurrent themes in the construction of analyses possible using the Irish HGIS.

Figure 3.1 presents the core geographies for which data in the Irish HGIS are available. The earliest material from the 1834 First Report mentioned earlier is on attendance at religious services on the chosen census day and was published at the very aggregate level of the contemporary Church of Ireland diocese (there were thirty-two dioceses at this time). The next available data came from the first inclusion of a religion inquiry in the decennial census in 1861. These data were available at the barony level (there were 334 baronies across Ireland in that year). A major change occurred after 1901, with the medieval baronies replaced by the urban and rural district (URD) structure, the latter lasting through to the second half of the twentieth century, with 220 districts in the then Re-

1834 Church of Ireland dioceses



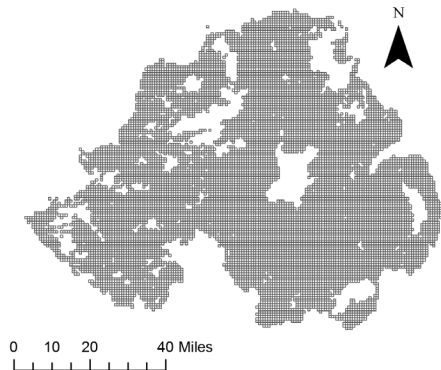
1861 baronies



1961 urban and rural districts



Northern Ireland 1 km. grid squares



### 3.1. Core spatial units for the Troubled Geographies project.

public of Ireland and 67 in Northern Ireland in 1961. However, during the course of the twentieth century, the number of units changed with each census, as new urban areas tended to be incorporated and rural districts merged, reflecting broader population shifts from the countryside to the towns. From 1971 another major change occurred, as NISRA adopted a

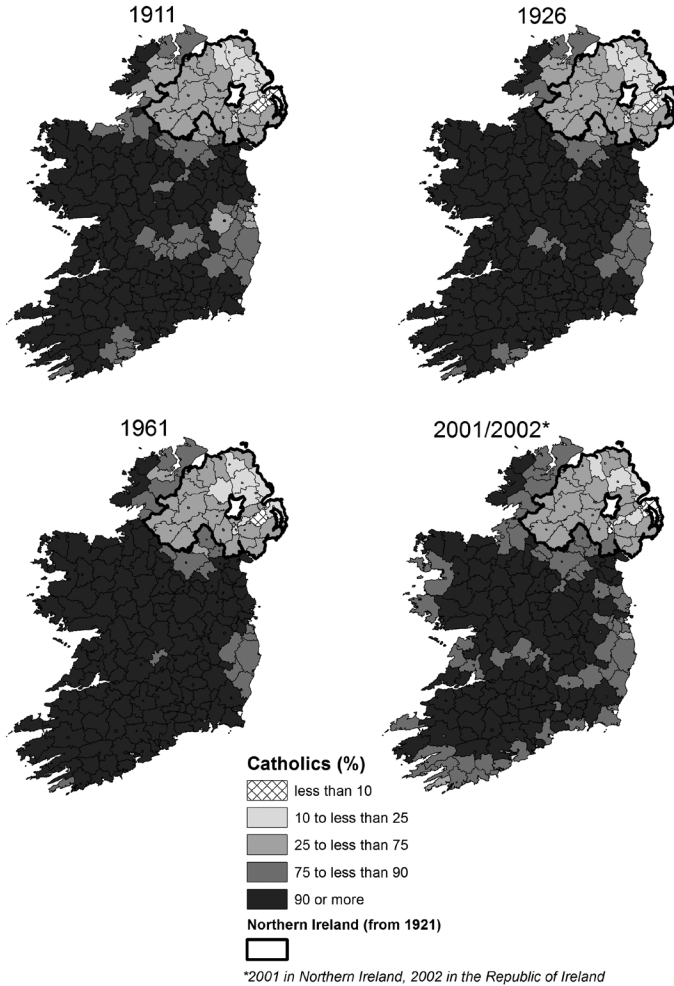
novel approach to the problem of dealing with inconsistent boundaries over time with the introduction of the grid square package. This has led to publication of census data at 1-kilometer squares across all of Northern Ireland and for smaller 100-meter squares for all urban areas.

The two major changes in territorial organization just noted subsequently marked a divide between two different data-handling strategies. In the project the data available for baronies from the censuses between 1861 and 1901 were analyzed without any attempt to relate baronies to the structure of districts that succeeded them. The earlier data for 1834 were handled in a similar way. However, for the district-level material from 1911 forward, it was possible to take a different course and use spatial interpolation to produce estimates of all data values in the period referenced to a single standardized version of districts as they existed at the time of the 1961 census, irrespective of the particular prior version of district boundaries for which the data were originally produced.<sup>17</sup> By recourse to this strategy, it has become possible to appreciate temporal changes in Ireland's contested religious geographies.

#### RELIGIOUS CHANGE IN IRELAND SINCE THE GREAT FAMINE

An initial impression of the dynamics in Ireland's religious geographies is apparent from figure 3.2. The series of maps in this figure shows Catholics as a percentage of the entire population at URD level at four census dates between 1911 and the start of the current millennium. In the remainder, non-Catholic population, the two largest Protestant denominations have been the Episcopal Church of Ireland and the Presbyterian Church in Ireland.<sup>18</sup> The maps in figure 3.2 highlight the historical dominance of the Catholic population in the south and west of the island and the impact of the Ulster plantations of the seventeenth century in establishing an enduring Protestant influence in the north, particularly in the extreme northeast. Also shown on the maps is the border of Northern Ireland, established after the 1920 Government of Ireland Act took effect in 1921. The somewhat lower percentages of Catholics in the southern districts along the eastern seaboard and in the counties around Dublin (known as "the Pale"), the Midlands, and West Cork indicate areas



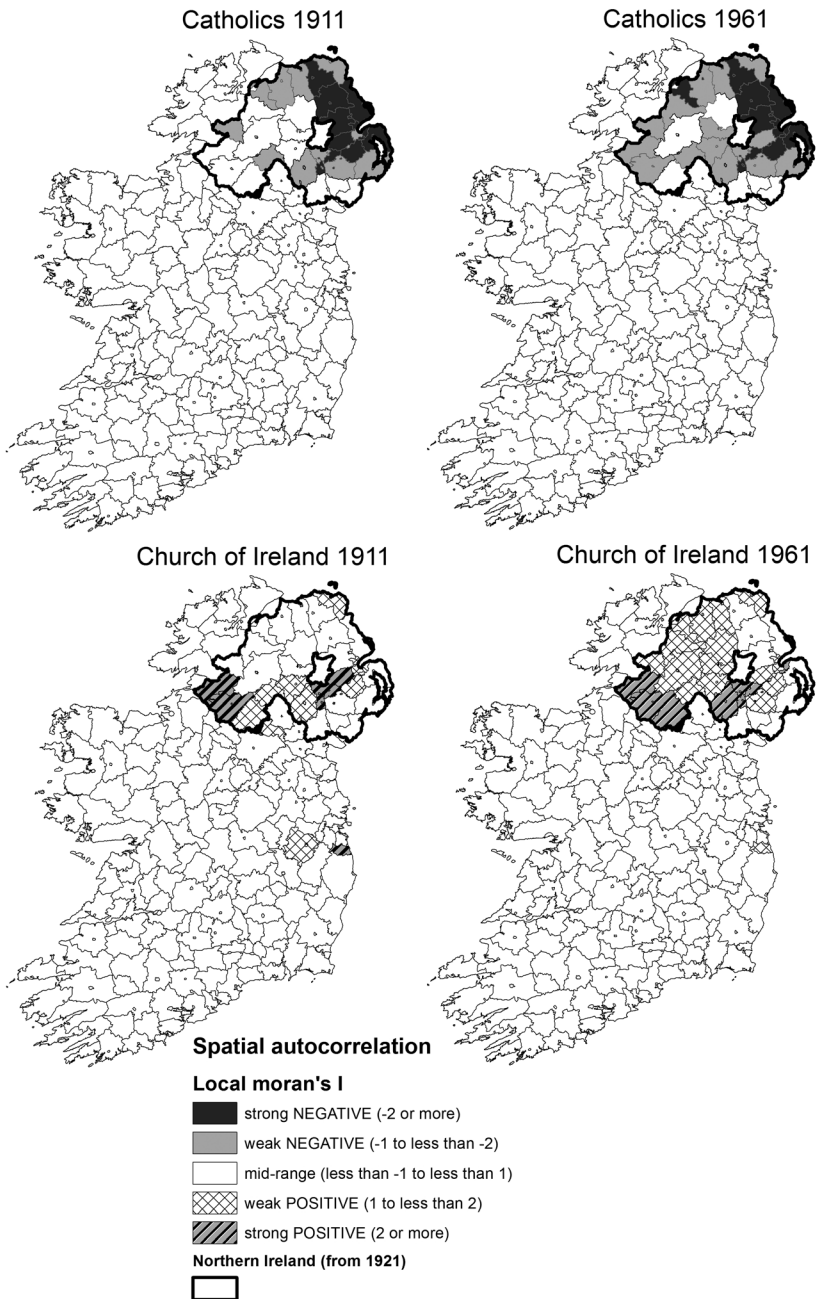


3.2. Series of maps showing changes in district-level percentages of Catholics over four snapshots between and including 1911 and 2001/2002. For the district maps here and in subsequent figures, the percentages are derived from census data interpolated to districts as they existed in 1961, affording direct comparison over time.

of modest Protestant population. These patterns are not especially novel to anyone with a reasonable knowledge of modern Irish history, but the maps organize the data into an unprecedented view that highlights the changes occurring over time. Between 1911 and 1926 there was a marked contraction in the Protestant population of the Irish Free State from the

aforementioned districts and also in districts immediately south of the border. As a whole the proportion of Protestant population in the south went from about 25 percent in 1911 to less than 8 percent by 1926.<sup>19</sup> This process continued through 1961 as the south became even more Catholic dominated. However, by 2001–2002 the trend appears to have changed again, in fact reversing, as a new pattern of non-Catholic settlement began to become apparent, very much associated with the coastal regions of the east and west as well as the southern border districts. With the Republic’s “tiger economy” of the mid-1990s and also as a result of European Union membership, the country went from being a net exporter to an importer of people.<sup>20</sup> The coastal character of much of this change in some of the island’s most scenic areas perhaps results from counter-cultural in-migration into these districts, particularly from the more traditionally Protestant countries of northern Europe.<sup>21</sup> Conversely, the maps also indicate a consistent pattern of relative growth in the Catholic population in the Greater Belfast area throughout the twentieth century, such that Catholics and Protestants are living in greater numbers closer together than before. The population of the Greater Belfast area has grown significantly, even if the City of Belfast’s population has itself declined since its 1911 peak owing to suburbanization, industrial collapse, and the dangers, real and perceived, of the Troubles. However, further analysis confirms that the formation of enclaves based on religious and political identities rather than on widespread residential integration has remained a feature in this trend.

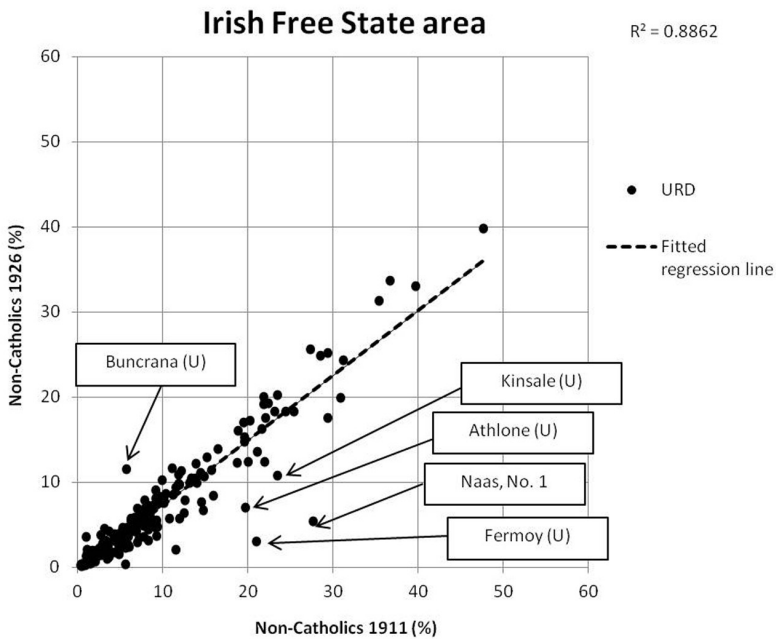
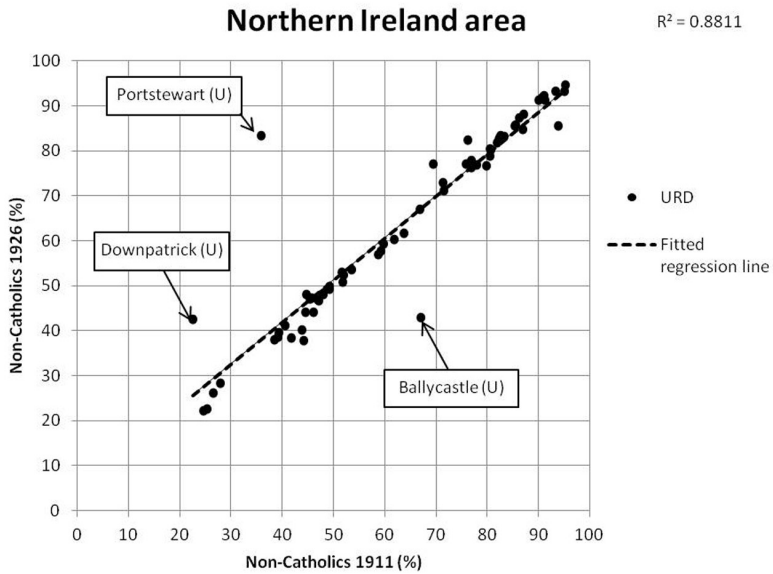
The last census for which data are available at URD level across all of Ireland for the three largest religions (Catholic, Church of Ireland, and Presbyterian) is 1961. The maps in figure 3.3 begin to compare changes in the distributions of Catholic and Church of Ireland populations from 1911 up to that date. These maps were created using a so-called local indicator technique, namely, a local Moran’s *I* test for assessing whether the district-level percentages for either religion are spatially autocorrelated. “Autocorrelation” is the formal term for patterning in values; that is, values do not simply vary randomly over space. The Moran’s *I* test can be used to assess both positive and negative spatial autocorrelation (as well as zero autocorrelation). Positive local Moran’s *I* values indicate clustering of similar values, whether high or low, while negative values indi-



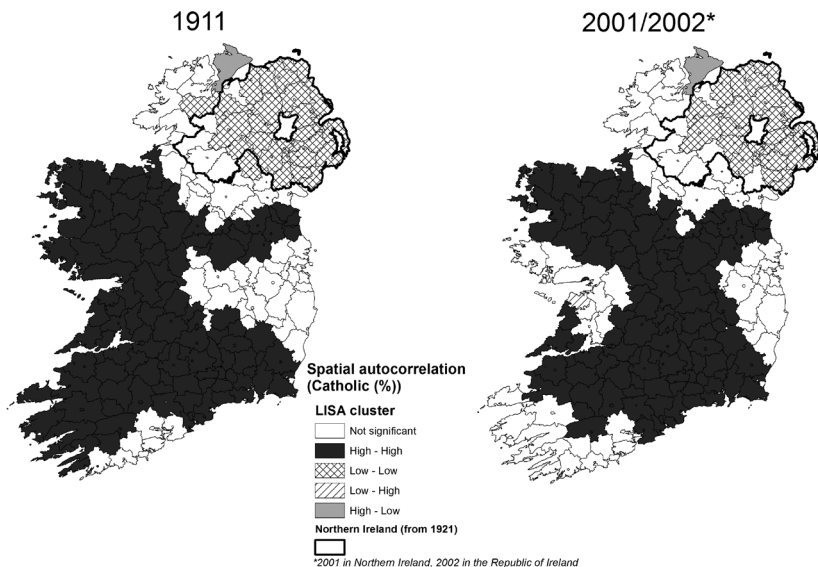
3.3. District-level maps from the local Moran's *I* autocorrelation analysis, identifying particular clusters of districts in 1911 and again in 1961. The maps are based on their percentage Catholic (*top*) and percentage Church of Ireland (*bottom*) populations.

cate locations surrounded by widely differing values. The “raw” *I* values mapped in figure 3.3 alone do not indicate if such clustering is statistically significant. However, application of this exploratory technique serves to convey the distinct picture in Northern Ireland, where clusters of districts having lower percentages of Catholics can be seen in the north-east area in and near Belfast. Comparing the two maps for Catholics in figure 3.3 also suggests that the extent of clusters of neighboring Northern Ireland districts having low Catholic percentages changed between 1911 and 1961. The maps on the bottom tier of the figure are based on the percentages of district populations who were members of the Church of Ireland. In all but a few districts south of the border, the proportion of population in the Church of Ireland was too small to identify spatial clusters, although, as shown on the 1911 map, a few eastern districts in the counties of Kildare and Wicklow and along the border itself stand out as having somewhat higher percentages. These were a throwback to patterns of colonial settlement in the Pale. By 1961, however, there were barely any signs of significant clusters in the south. Conversely, north of the border, clusters of districts with high proportions of population that identified as Church of Ireland had increased in size. These changes reflected an ongoing process of religio-spatial realignment perhaps linked to but certainly continuing beyond the partition of the island in 1921.<sup>22</sup>

Figures 3.4a and 3.4b present another view on these trends, showing changes in the district-level percentages of *non*-Catholics over the fifteen years between 1911 and 1926, before and after partition. As with the maps in figure 3.3, these percentages are based on estimates interpolated for the 1961 version of the URD framework. Each circle on these scatter plots represents a separate district. Generally speaking, non-Catholic percentages are higher in districts in Northern Ireland than in the Irish Free State/Republic of Ireland at both dates. In the Northern Ireland area it appears that a few districts saw a slight decrease in the percentage of non-Catholics by 1926. Otherwise, for other districts north of the border, there is a high degree of consistency in the percentages at both dates. This correspondence is indicated by the clustering of the circles around the upward-sloping regression line and the high *R*<sup>2</sup> value (close to 1). Clear outliers are also labeled on the chart, including Ballycastle Urban, Downpatrick, and Portstewart. These districts did not exist in



**3.4. a and b.** Scatter graphs plotting district-level percentages of non-Catholics in 1926 against the corresponding percentages in 1911 in (a) districts in Northern Ireland, and (b) districts in the Irish Free State.



3.5. Maps from the LISA autocorrelation analysis of district-level percentages showing the type of spatial autocorrelation present between neighboring districts based on the percentage of their populations recorded as Catholic.

1911 but were formed by 1926, and the clear disparity in the 1911 and 1926 percentages for these districts is an extreme example of the error that can arise as a consequence of using spatial interpolation to estimate values for the standardized districts. For the other districts, which were created before partition and for which boundary changes have been less dramatic, the interpolation errors are likely to be much less extreme.<sup>23</sup>

The second chart for the districts in the Irish Free State/Republic of Ireland area highlights the much smaller fraction of districts there in which percentages of non-Catholics approached the levels in Northern Ireland. Moreover, the distribution of circles suggests a general decrease in these percentages in 1926. Some of the greatest changes were in districts with large British military garrisons, and the evacuation of Crown forces en masse *after* 1922 is the primary reason for the much lower percentages in 1926 in towns such as Athlone and Fermoy as well as the rural district of Naas, No. 1, which was home to the Curragh Camp, the British Army's main infantry base in Ireland.<sup>24</sup> Conversely, Buncrana Urban

was the only district in the south to have a noticeably higher percentage of non-Catholics in 1926 compared to the percentage in the district in 1911. Buncrana was one of the “Treaty Ports,” which were to be retained for the use of Britain’s Royal Navy under the Anglo-Irish accord of December 1921.<sup>25</sup> However, these are exceptional cases. More generally, the decreased percentages in 1926 for many districts in the south indicate a rapid reduction of the Protestant population from an already low base.

The message from the preceding figures is that the contours of Irish religion were changing with the 1921 partition but that this trend continued into later decades as well. The polarization between Catholic-dominated districts in the south and Protestant districts in the north was becoming clearer and was a reflection of deeper political differences. A final illustration of this is provided by the maps in figure 3.5, which again were produced using a local indicator technique for identifying spatial clustering.<sup>26</sup> Anselin’s LISA method has a specific advantage over the local Moran’s *I*, as it can identify clusters of both low and high values simultaneously. The local Moran’s *I* technique used in figure 3.3 cannot identify significant clusters where populations are universally high or low across wider geographical areas. In figure 3.5 the results show more clearly changes in prominent (statistically significant) clusters. These clusters are labeled by type, “high-high” and “low-low” indicating significant clusters of districts having similarly high or low percentages, respectively. The two other types, “low-high” and “high-low,” conversely indicate districts with percentages that are significantly different from their neighbors. In 1911 the Catholic population was highest over vast swathes of the south and west of the island, covering almost all of the provinces of Connacht and Munster and signified by the “high-high” designation covering many districts in those locations. Conversely, they were lowest in the extreme northeast in the districts included in the “low-low” cluster, which covers almost all of what was soon to become Northern Ireland. By 2001–2002, however, there had been a change in this pattern. The significant cluster identified at this date is smaller than that shown on the 1911 map (excluding districts along the Atlantic seaboard), pointing to a growth in the non-Catholic share of the populations of these areas. Indeed, a lone “low-high” district has emerged on the shores of Galway Bay, indicating an area of lower Catholic population



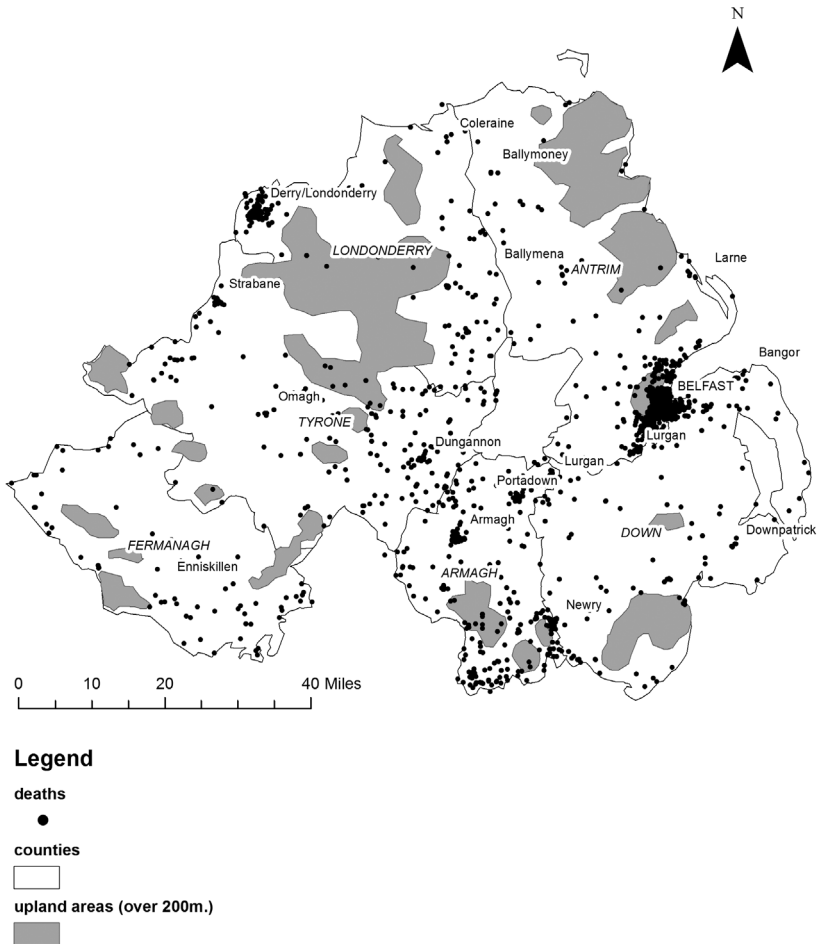
surrounded by districts with much higher proportions of Catholics. This is likely to be the result of the process of countercultural migration noted earlier, matched by a movement of young Catholics away from these rural areas toward the major urban centers both within and beyond Ireland. In addition, the “high-high” cluster of districts for 2001–2002 includes districts farther to the east of Ireland than in 1911, where the Catholic proportion of the Pale has increased over the course of the twentieth century. In Northern Ireland a significant cluster of districts with similarly low percentages of Catholics is present, but it includes fewer districts than the cluster identified on the 1911 map, reflecting in turn the growth of the Catholic population within Northern Ireland during the second half of the twentieth century. Taken together, the maps in this section of the chapter underscore the dynamism as well as the continuity that has defined the religious geographies of twentieth-century Ireland.

#### THE GEOGRAPHY OF THE TROUBLES

The conflict in and over Northern Ireland that erupted in 1969 and was to last for most of the remainder of the century was the starkest manifestation of the cleavages in political and religious identities to have beset the island. The cycle of conflict hardened territorial differences as parts of Belfast, Derry/Londonderry, and other locations became “safe” or “no go” areas for different groups. Now, as Ireland pulls away from that darker period, more can be learned about the varied dimensions of violence and terror and how these touched people’s lives. While the conflict itself has received a great deal of academic and media attention, comparatively less time has been spent on the spatial aspects of the crisis.<sup>27</sup> This is all the more remarkable when we consider how integral geography was to the Troubles. According to the historian A. T. Q. Stewart, “topography is the key to the Ulster conflict. Unless you know exactly who lives where, and why, much of it does not make sense. . . . Ulster’s troubles arise from the fact that people who live there know this information to the square inch, while strangers know nothing of it.”<sup>28</sup>

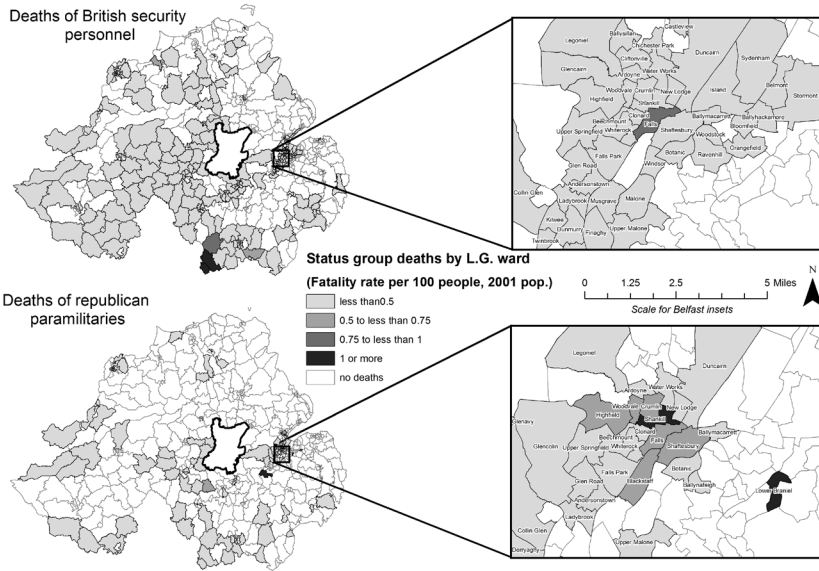
The “Troubled Geographies” project was the first to georeference records of the more than 3,500 fatalities that occurred in Northern Ireland as a result of the conflict between 1969 and 2001. The starting point for





3.6. Mapped locations of all Troubles fatalities in Northern Ireland between 1969 and 2001.

this was a database compiled previously by Malcolm Sutton to commemorate all individuals who lost their lives, irrespective of creed or role in the conflict.<sup>29</sup> This database is also hosted on the University of Ulster's Conflict Archive on the Internet (CAIN) website.<sup>30</sup> The Sutton database provides a wide range of information about the victims and the circumstances in which they died. Importantly, this information includes the locations where fatal incidents occurred, and locational information is



3.7. Northern Ireland map of fatalities by British security personnel (*top*) and by republican paramilitary groups (*bottom*). Deaths standardized by ward population size, with the Belfast area shown in more detail (*inset map*).

available for the majority of records. Where this is not the case or where the information is vague, other sources were used in the “Troubled Geographies” project to try and identify locations for recorded fatalities.<sup>31</sup>

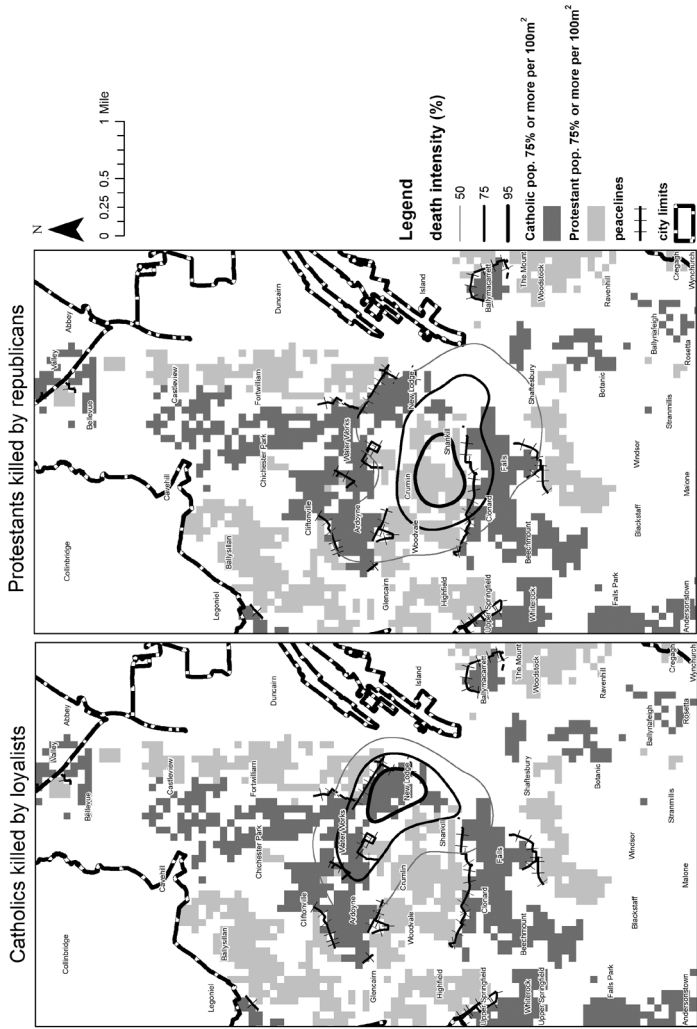
Figure 3.6 uses points to map the georeferenced records of fatalities sourced from the Sutton index. Unsurprisingly, clear signs of clustering are apparent. Many fatalities were concentrated in the major urban centers of Belfast and Derry, and beyond these centers fatalities occurred in large numbers in an arc stretching southwest from Belfast and south of Lough Neagh and encompassing the towns and hinterlands of Lurgan, Portadown, Armagh, and Dungannon. Another cluster is evident in the South Armagh salient, south and west of Newry, close to the border with the Republic. Similarly, fatalities are also evident at other frontier locations farther to the west.

Once these records were georeferenced, the additional detail contained in the Sutton database enabled further analysis of fatalities occurring within different groups. This is illustrated in figure 3.7, which shows

how fatalities for the British security services and for all republican paramilitaries were distributed.<sup>32</sup> These distributions are standardized to ward-level populations using 2001 census data, giving a crude indication of rates. For members of the security services, deaths occurred at a low rate across a broad sweep covering most wards in the western counties of Fermanagh and Tyrone. Higher rates are most evident in the border area in the south of County Armagh. The South Armagh brigade of the Provisional Irish Republican Army (PIRA) waged a particularly successful campaign against the security services, earning the region a fearsome reputation among troops deployed there, so much so that from the mid-1970s it was deemed too dangerous for soldiers to use ground transportation to access the many mountaintop observation posts along the border, with all deployments and supplies moved by air instead.<sup>33</sup> In the inset map in figure 3.7, covering the Belfast area, it can be seen that the rate of fatalities among members of security services was higher in the Catholic Falls ward of West Belfast than in other city wards.

For republican paramilitaries the distribution of rates is quite different. Deaths tended to be spatially focused in the areas of South Down and South Armagh, where there was significant paramilitary activity. In addition, the map of rates shows that some paramilitary fatalities also occurred in parts of East Tyrone, perhaps reflecting more effective deployment of specialist military units there than in South Armagh in terms of their ability to infiltrate the PIRA.<sup>34</sup> The isolated ward southwest of Belfast for which a high rate is evident in fact locates the Maze prison, in which the deaths of thirteen PIRA and Irish National Liberation Army (INLA) volunteers occurred during the hunger strikes of the early 1980s.<sup>35</sup> In Belfast itself the inset map shows the highest rates of republican paramilitary fatalities in the Protestant wards of Shankill, Woodvale, and Highfield. In addition, the mixed Shaftesbury ward, covering most of the city center, stands out as the location of many republican bomb attacks, particularly in the early phases of the conflict.<sup>36</sup>

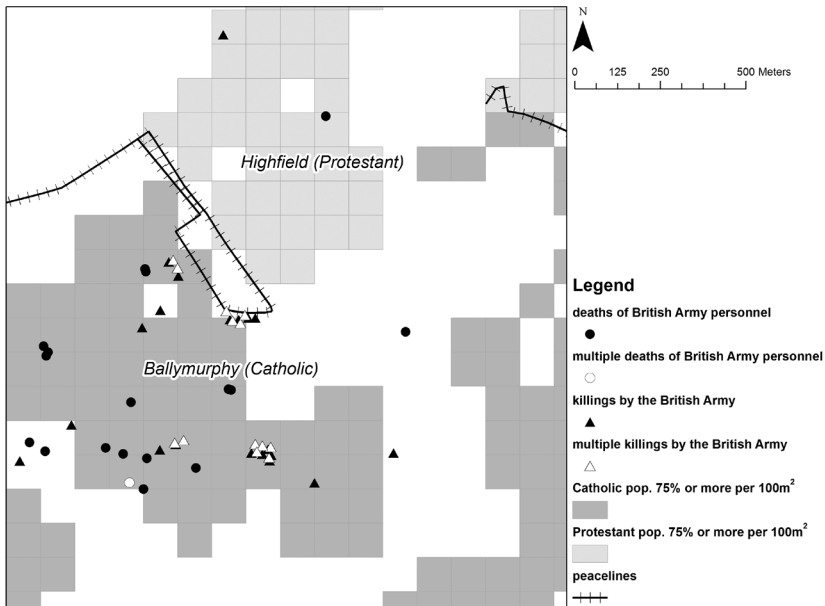
The Sutton index also includes information on the perpetrators of fatalities, and in the “Troubled Geographies” project this meant that locations of fatalities cross-referenced by known perpetrators could be subject to further analysis using GIS analytical techniques. The maps of Belfast in figure 3.8 were produced using a technique known as kernel



3.8. Smoothed map of fatalities in Belfast (*left*) for Catholics killed by loyalist paramilitaries (*right*) and Protestants killed by republican paramilitaries. Both are overlaid onto choropleth map of religious geographies generated using 2001 census data for 100-by-100-meter grid squares.

density smoothing, applied to locations of Catholic fatalities at the hands of loyalist paramilitaries and vice versa to Protestant killings by republican paramilitaries. As its name implies, the technique works to generate a smooth surface-based representation from a set of point-based records, where the surface can be represented as values for a grid of cells or, as here, using isopleth contour lines.<sup>37</sup> The amount of smoothing applied can be varied, but the point is to use the approach to aid more clear identification of “hot spots.”<sup>38</sup> The smoothed surfaces are represented in the maps in figure 3.8 using the black contour lines. The more “blocky” patterns also shown on these maps portray the 100-by-100-meter grid cells now used by NISRA in publishing key census variables. The squares having Catholics as 75 percent or more of their total enumerated population according to the 2001 census are shaded in the darker gray, while light gray is for squares in which Protestants made up 75 percent or more of the population. Locations of so-called peace lines – barriers erected by the security services between Catholic and Protestant neighborhoods – are also shown.

Comparing the two maps in figure 3.8 shows that Catholic fatalities were greatest in Catholic areas, notably in the New Lodge neighborhood; similarly, Protestant deaths were focused in the almost exclusively Protestant Shankill area. However, there are also distinctions between the two distributions, since Protestants appeared to be killed more often in an area where the boundaries between the two communities were relatively well defined and where their numbers might have afforded them greater protection. For the Catholic population, loyalist paramilitaries tended not to target the Falls heartland as often as the New Lodge, and this may have been because the interfaces between the Catholic and Protestant areas of this part of inner-city North Belfast have historically been less well defined and more contested. On the other hand, the long peace line in the west of the city between the Falls and the Shankill districts constricted access to the former from the early 1970s, perhaps affording the Catholics of the Falls a modest protection that those in the New Lodge did not enjoy. In contrast, in the New Lodge area it would have been easier for loyalist paramilitaries to launch attacks and then escape back to the surrounding Protestant districts.<sup>39</sup>



3.9. Large-scale map showing an interface area of West Belfast overlaid with locations of fatalities of and by British Army personnel during the Troubles.

A final map display serves to show that religious geographies influenced the occurrence of other fatalities and the shape of the Troubles more generally. The map in figure 3.9 focuses in on a highly contested interface area of West Belfast between the Protestant Highfield and Catholic Ballymurphy areas. The same shading has been applied to 100-by-100-meter grid cells as in figure 3.8. Here, however, the goal is not to smooth a general surface; instead, point symbols representing locations of individual killings are retained in the display. These locations are for fatalities among and committed by the British Army, which was heavily deployed in Catholic areas as the threat from the PIRA and other republican splinter factions intensified from the start of the 1970s. Yet it must be remembered that the arrival of soldiers in those areas was initially seen by both the military and the resident Catholic population as necessary and defensive.<sup>40</sup> However, just a year later the battle for “hearts and minds” was already being lost, and the Catholic perception of the army had already swung from friend to foe.<sup>41</sup> The concentration of fatalities on

the Catholic Ballymurphy side of the peace line provides a stark view of this change, as both the soldiers and the communities they were sent in to protect became targets in a protracted and bitter conflict.

## CONCLUSIONS

This chapter has given an overview of the “Troubled Geographies” project and the light it has been shedding on Ireland’s religious geographies at a variety of scales. Elsewhere, conflict in modern Ireland has sometimes been portrayed simplistically as a religious war between Catholics and Protestants. In contrast, the project has shown that changing spatial relationships have also been a key part of this difference, contributing to and manifest in the crisis in Northern Ireland in the latter part of the twentieth century.<sup>42</sup>

This chapter has focused on the spatial dimensions of religious difference over two centuries. Yet, looking ahead, we should not lose sight of the common experience that has been forged by these differences. While the island of Ireland is still characterized by a historic religio-spatial polarity between a nominally Catholic south and a supposed Protestant north, we need to acknowledge that the social meaning of such descriptors has completely changed over the past 150 years and that now more emblematic of both jurisdictions is a growing unwillingness among citizens to be categorized in religious terms. Furthermore, the ancient north–south divide is increasingly being supplanted by a wider dichotomy between an undeveloped western hinterland and a bloated metropolitan east, the product of transnational forces of industrialization and urbanization and, latterly, deindustrialization and suburbanization that have transformed the island utterly, transcending any parochial border.

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ect collaborators are also grateful to Dr. Martin Melaugh (University of Ulster) for making the Sutton database available to us. Thanks are also due to the CSO and NISRA for the modern census data that made much of this analysis possible.



## NOTES

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2. J. H. Whyte, *Interpreting Northern Ireland* (Dublin: Gill & Macmillan, 1991), 103; S. Bruce, *God Save Ulster! The Religion and Politics of Paisleyism* (Oxford: Oxford University Press, 1986), 263; and R. English, "Sectarianism and Politics in Modern Ireland," in *Nothing but Trouble? Religion and the Irish Problem*, ed. D. Kennedy (Belfast: Irish Association for Cultural, Economic and Social Relations, 2004), 45–49, see 45.
3. R. F. Foster, *Modern Ireland 1900–1972* (Harmondsworth: Penguin, 1989), 59; and A. Clarke with R. D. Edwards, "Pacification, Plantation and the Catholic Question, 1603–23," in *A New History of Ireland III: Early Modern Ireland 1534–1691*, ed. T. W. Moody, F. X. Martin, and F. J. Byrne (Oxford: Clarendon Press, 1976), 187–232, see 188; B. Graham, "Ireland and Irishness: Place, Culture and Identity," in *In Search of Ireland: A Cultural Geography*, ed. B. Graham (London: Routledge, 1997), 1–16, see 1; W. J. Smyth, "The Cultural Geography of Rural Ireland in the Twentieth Century," in *The Shaping of Ireland: The Geographical Perspective*, ed. W. Nolan, Thomas Davis Lecture Series (Cork/Dublin: RTÉ/Mercier Press, 1986), 165–75, see 175.
4. J. McGarry and B. O'Leary, *Explaining Northern Ireland* (Oxford: Blackwell, 1995), 174; C. Mitchell, *Religion, Identity and Politics in Northern Ireland: Boundaries of Belonging and Belief* (Aldershot: Ashgate Publishing, 2006), 13; and C. Coulter, *Contemporary Northern Irish Society: An Introduction* (London: Pluto Press, 1999), 55–58.
5. This will become evident in the analysis of patterns of violence during the Troubles from 1969, but the power of territory in the wider context also helps explain why the dropping of the recidivist articles 2 and 3 from the constitution of the Irish Republic was seen as a critical step in the peace process. See A. Guelke, "Northern Ireland: International and North/South Issues," in *Ireland and the Politics of Change*, ed. W. Crotty and D. E. Schmitt (Harlow: Addison Wesley Longman Ltd., 1998), 195–209, see 198.
6. M. P. A. Macourt, "The Religious Inquiry in the Irish Census of 1861," *Irish Historical Studies* 21, no. 82 (1978): 168–87, see 176.
7. L. Kennedy, P. S. Ell, E. M. Crawford, and L. A. Clarkson, *Mapping the Great Irish Famine* (Dublin: Four Courts Press, 1999), 13.
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9. Queen's University of Belfast, *Centre for Data Digitisation and Analysis*, [http://www.qub.ac.uk/cdda/CDDA\\_2011/Welcome](http://www.qub.ac.uk/cdda/CDDA_2011/Welcome).

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11. *Ibid.*, 95.

12. See, for example, Akenson, *Small Differences*; D. Fitzpatrick, "The Geography of Irish Nationalism," *Past and Present* 78 (1978): 113–44; P. Hart, *The I.R.A. at War 1916–1923* (Oxford: Oxford University Press, 2005); D. W. Miller, "Mass Attendance in Ireland in 1834," in *Piety and Power in Ireland, 1760–1960: Essays in Honour of Emmet Larkin*, ed. S. J. Brown and D. W. Miller (Belfast/South Bend, Ind.: Institute of Irish Studies/Notre Dame University Press, 2000), 158–79; D. W. Miller and L. J. Hochberg, "Modernisation and Inequality in Pre-Famine Ireland: An Exploratory Spatial Analysis," *Social Science History* 31 (2007): 35–60; C. Ó Gráda, *Ireland: A New Economic History 1780–1939* (Oxford: Clarendon Press, 1994).

13. I. N. Gregory, C. Bennett, V. L. Gilham, and H. R. Southall, "The Great Britain Historical GIS Project: From Maps to Changing Human Geography," *Cartographic Journal* 39 (2002): 37–49, see 37.

14. Online Historical Population Reports, *Histpop – Home* (2007), <http://www.histpop.org/ohpr/servlet/>.

15. I. N. Gregory and P. S. Ell, *Historical GIS: Technologies, Methodologies and Scholarship* (Cambridge: Cambridge University Press, 2007), 143.

16. In pre-Famine Ireland, population growth was a largely rural, as opposed to an urban, phenomenon, a product of farm subdivision on the western seaboard. In Britain and other places, towns and cities saw enormous growth as a result of the Industrial Revolution. Second, while most nations only saw their populations begin to level off during the middle of the

twentieth century, in Ireland the Great Famine of 1845–52 brought that process to an abrupt and tragic end. See M. E. Daly, *The Slow Failure: Population Decline in Independent Ireland, 1922–1973* (Madison: University of Wisconsin Press, 2006), 3.

17. I. N. Gregory, "Different Places, Different Stories: Infant Mortality Decline in England and Wales, 1851–1911," *Annals of the American Association of Geographers* 98 (2008): 773–94, see 784–86.

18. In 2001–2002 Christians or those of a Christian upbringing accounted for 97 percent of the population of Northern Ireland and 92 percent of the Republic of Ireland. See Northern Ireland Statistics and Research Agency, *2001 Key Statistics to Output Area Level* (2001 census key statistics report, 22) (2003), <http://www.nisra.gov.uk/archive/census/2001/key%20statistics/Key%20Statistics%20ReportTables.pdf>; Central Statistics Office, *Census 2002 Volume 12 – Religion – Entire Volume* (2002 census religion report, 9) (2004), [http://www.cso.ie/en/media/csoie/census/documents/vol12\\_entire.pdf](http://www.cso.ie/en/media/csoie/census/documents/vol12_entire.pdf).

19. T. Brown, *Ireland, A Social and Cultural History 1922–1985* (London: Fontana Press, 1985), 107.

20. M. L. Ferreira and P. Vanhoudt, "Catching the Celtic Tiger by Its Tail," *European Journal of Education* 39 (2004): 209–35, see 209; J. D. House and K. McGrath, "Innovative Governance and Development in the New Ireland: Social Partnership and the Integrated Approach," *Governance: An International Journal of Policy, Administration and Institutions* 17 (2004): 29–58, see 29–33; D. Ferriter, *The Transformation of Ireland 1900–2000* (London: Profile Books, 2004), 663–64. The situation has, of course, been transformed disastrously since the start of the new century, but it is too soon to gauge the demographic impacts of the global financial crisis on the republic.

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23. I. N. Gregory, "The Accuracy of Areal Interpolation Techniques: Standardising 19th and 20th Century Census Data to Allow Long-Term Comparisons," *Computers, Environment and Urban Systems* 26 (2002): 293–314, see 311.

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25. F. Pakenham, *Peace by Ordeal: The Negotiation of the Anglo-Irish Treaty, 1921* (London: Pimlico, 1992), 289.

26. L. Anselin, "Local Indicators of Spatial Association – LISA," *Geographical Analysis* 27 (1995): 93–115.

27. See J. A. Schellenberg, "Area Variations of Violence in Northern Ireland," *Sociological Focus* 10 (1977): 69–78; M. A. Poole, "The Spatial Distribution of Political Violence in Northern Ireland: An Update to 1993," in *Terrorism's Laboratory: The Case of Northern Ireland*, ed. A. O'Day (Aldershot: Dartmouth Publishing Group,

1995), 27–45; M. T. Fay, M. Morrissey, M. Smyth, and the Cost of the Troubles Study, *Mapping Troubles-Related Deaths in Northern Ireland 1969–1998*, 2nd ed. (Londonderry: INCORE [University of Ulster & the United Nations University], 1998); V. Mesev, J. Downs, A. Binns, R. S. Courtney, and P. Shirlow, "Measuring and Mapping Conflict-Related Deaths and Segregation: Lessons from the Belfast 'Troubles,'" in *Geospatial Technologies and Homeland Security*, ed. D. Z. Sui (Berlin: Springer Science and Business Media, 2008), 83–101; V. Mesev, P. Shirlow, and J. Downs, "The Geography of Conflict and Death in Belfast, Northern Ireland," *Annals of the American Association of Geographers* 99 (2009): 893–903.

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31. Additional information on the circumstances and locations of deaths of individual victims of the Troubles came from contemporary newspapers and the book *Lost Lives*. See D. McKittrick, S. Kelters, B. Feeney, C. Thornton, and D. McVea, *Lost Lives: The Stories of the Men, Women and Children Who Died as a Result of the Northern Ireland Troubles*, 2nd ed. (Edinburgh: Mainstream Publishing, 2007).

32. The figure for British security comprises all Crown forces operating

in Northern Ireland during the conflict, namely, all units of the British Army, the Royal Ulster Constabulary (RUC), the RUC Reserve, the Ulster Defence Regiment (UDR), and the UDR Reserve. The figure for republican paramilitaries consists of the Provisional Irish Republican Army (PIRA) and Official IRA, the Irish National Liberation Army (INLA), and the Irish People's Liberation Organisation (IPLO). It also includes deaths of republican paramilitaries operating under associated cover names.

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34. M. Urban, *Big Boys' Rules: The SAS and the Secret Struggle against the IRA* (London: Faber and Faber, 1992), 224–29; and E. Moloney, *A Secret History of the IRA* (London: Penguin, 2003), 304–9.

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38. D. O'Sullivan and D. Unwin, *Geographic Information Analysis* (Hoboken, N.J.: John Wiley & Sons, 2003), 85–88; and Gregory and Ell, *Historical GIS*, 177–80.

39. M. Dillon, *The Shankill Butchers: A Case Study of Mass Murder* (London: Arrow Books, 1990), 11–12, 107; I. S. Wood, *Crimes of Loyalty: A History of the UDA* (Edinburgh: Edinburgh University Press, 2006), 172.

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